

"CLEAN" COPY OF THE AMENDED SPECIFICATION

WATER-PROOF BALL STRUCTURE

Field of the Invention

The present invention relates to a water-proof ball structure, wherein the manufacturing efficiency is increased and cost is reduced. Moreover, once after the ball core is manufactured, the wet-proof elastic bags can enclose the ball core immediately. Thereby, in other manufacturing process, the ball core will not be wetted.

Background of the Invention

With reference to Fig. 1, the game-used ball core 10 of a basket ball is made by winding a plurality of woolen yarns or other yarn which can absorb water. A water-proof elastic layer 20 encloses the ball core 10 so as to prevent the ball core 10 from wetting. Then a cover 30 encloses the water-proof elastic layer 20 so as to form a complete basketball. To fix the cover 30 to the water-proof elastic layer 20, a yarn layer 40 is installed between the water-proof elastic layer 20 and the cover 30.

With reference to Fig. 2, currently, the water-proof elastic layer 20 is mainly made of rubber. Then a mold 50 is used to heat and vulcanize the water-proof elastic layer 20. Thereby, the cost for making and maintaining the mold is necessary. Moreover, the process of heating and vulcanization needs more time. Currently, the time for forming a ball core 10 is shorten than that for forming the water-proof elastic layer 20. Thereby, a waiting time is necessary for enclosing the water-proof elastic layer 20 to the ball core 10. However, in this period, the ball core 10

will wet so as to deteriorate the quality of the basket ball so as to affect the use of the basket ball. For example, the basketball easily deforms.

Summary of the Invention

Accordingly, the primary object of the present invention is to provide a water-proof ball structure, wherein the manufacturing efficiency is increased and cost is reduced. Moreover, once after the ball core is manufactured, the water-proof elastic bags can enclose the ball core immediately. Thereby, in other manufacturing process, the ball core will not be wetted.

To achieve above objects, the present invention provides a water-proof ball structure which comprises a ball core; at least two water-proof elastic bags enclosing the ball core; each water-proof elastic bag having at least one opening, the openings of the at least two water-proof elastic bags being not overlapped; and a cover enclosing the at least two water-proof elastic bags. Each water-proof elastic bag is made of two sheets, and each sheet has a shape like "8". If the water-proof elastic bag does not enclose the ball core, the volume of each water-proof elastic bag is smaller than that of the ball core.

The various objects and advantages of the present invention will be more readily understood from the following detailed description when read in conjunction with the appended drawing.

Brief Description of the Drawings

Fig. 1 is a cross section view of the prior art basket ball.

Fig. 2 is a schematic view showing the process of forming a

water-proof elastic layer out of a ball core by vulcanization in the prior art.

Fig. 3 is an exploded perspective view of the present invention.

Fig. 4 is a structural cross section view of the present invention.

Detailed Description of the Invention

In order that those skilled in the art can further understand the present invention, a description will be described in the following in details. However, these descriptions and the appended drawings are only used to cause those skilled in the art to understand the objects, features, and characteristics of the present invention, but not to be used to confine the scope and spirit of the present invention defined in the appended claims.

With reference to Figs. 3 and 5, the structure of the present invention will be described herein.

Referring to Figs. 3, the present invention includes a ball core 60, at least two water-proof elastic bags 70 enclosing the ball core 60, and a cover 80 enclosing the at least two water-proof elastic bags 70.

The ball core 60 is like the prior art one, with reference to Figs. 3 and 4. It is formed by winding a plurality of yarns, such as woolen wires. However, this is not the main concern of the present invention, and thus the details will not be further described here.

The water-proof elastic bag 70, as shown in Figs. 3 and 4, is a bag body made of elastic rubber material, for example, latex, silica gel. The water-proof elastic bag 70 has at least one opening 71. If the water-proof elastic bag 70 does not enclose the ball core 60, the volume of each water-proof elastic bag 70 is smaller than that of the ball core 60.

The cover 80, as shown in Figs. 3 and 4, is formed by seaming two sheets. Each sheet has a shape like "8". The cover 80 enclosed the two

water-proof elastic bags 70. Since the cover 80 is used in the prior art, the detail will not be further described herein.

By above elements, when the ball core 60 is shaped, the two water-proof elastic bags 70 tightly enclose the ball core 60 so as to form as an elastic water-proof elastic layer. In assembly, the openings 71 of the at least two water-proof elastic bags 70 are not overlapped. Thereby, the ball core 60 is water-proofed. Then, a yarn layer 90 further encloses the two water-proof elastic bags 70. A layer of glue is coated upon the yarn layer 90.

It is known from above drawings, since in the present invention, at least two water-proof elastic bags 70 are used to enclose the ball core 60 and the openings 71 of the at least two water-proof elastic bags 70 are not overlapped. The ball core 60 is water-proofed. Moreover, the operation of assembling the water-proof elastic bags 70 to the ball core 60 is more rapidly than the prior art by heating in mold. Thus, the manufacturing efficiency is increased and cost is reduced. Moreover, once after the ball core 60 is manufactured, the water-proof elastic bags 70 can enclose the ball core 60 immediately. Thereby, in other manufacturing process, the ball core 60 will not be wetted.

The present invention is thus described, it will be obvious that the same may be varied in many ways. Such variations are not to be regarded as a departure from the spirit and scope of the present invention, and all such modifications as would be obvious to one skilled in the art are intended to be included within the scope of the following claims.